

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

ONTVANGEN

29 NOV. 2004

PCT

BEANTWOORD

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

To:

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Octrooibureau Vriesendorp & Gaade
P.O. Box 266
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Kopie gemaakt voor
schaduw dossier -
Den Haag

Date of mailing
(day/month/year)

25.11.2004

Applicant's or agent's file reference
PCTP170417A

IMPORTANT NOTIFICATION

International application No.
PCT/NL 03/00698

International filing date (day/month/year)
15.10.2003

Priority date (day/month/year)
16.10.2002

Applicant
VMI EPE HOLLAND B.V. et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international
preliminary examining authority:



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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)



REC'D 29 NOV 2004

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| Applicant's or agent's file reference PCTP170417A | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416) | |
| International application No. PCT/NL 03/00698 | International filing date (<i>day/month/year</i>) 15.10.2003 | Priority date (<i>day/month/year</i>) 16.10.2002 |
| International Patent Classification (IPC) or both national classification and IPC B29D30/24 | | |
| Applicant VMI EPE HOLLAND B.V. et al. | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 8 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
- I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

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|---|---|
| Date of submission of the demand 19.04.2004 | Date of completion of this report 25.11.2004 |
| Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 | Authorized Officer Fregosi, A Telephone No. +49 89 2399-7104  |

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/NL 03/00698**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-11 as originally filed

Claims, Numbers

1-15 as originally filed

Drawings, Sheets

1/7-7/7 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
- (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:
- ☐ the entire international application,
 - ☒ claims Nos. 15
- because:
- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):
 - ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 15 are so unclear that no meaningful opinion could be formed (*specify*):
- see separate sheet**
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
 - ☐ no international search report has been established for the said claims Nos.
2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:
- ☐ the written form has not been furnished or does not comply with the Standard.
 - ☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|-------|
| Novelty (N) | Yes: Claims | 1-11 |
| | No: Claims | 12-14 |
| Inventive step (IS) | Yes: Claims | 1-11 |
| | No: Claims | 12-14 |
| Industrial applicability (IA) | Yes: Claims | 1-14 |
| | No: Claims | |

2. Citations and explanations

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see separate sheet

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Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The expression:

“one or more of the characterizing measures described in the attached description and/or shown in the attached drawing”

used in claim 15 is vague and unclear and leaves the reader in doubt as to the meaning of the technical features to which it refers, thereby rendering the definition of the subject-matter of said claim unclear according to Article 6 PCT.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

2. Reference is made to the following documents:

D1: WO 01/68356 - A;

D2: US2002/0104620 - A1.

3. **Claims 1 to 11**

3.1 The document D1 which is regarded as being the closest prior art to the subject-matter of claim 1, shows (the references in parentheses applying to this document):

“a tyre building drum (1) including a turn-up mechanism comprising a set of axially extending arms (11) being provided each with a turn-up roller (12) and with means (15) for supporting the tyre component (2)”.

3.2 The subject-matter of claim 1 differs from this known D1 in that said means for supporting the tyre component are in practice realized as a movable support plate or as a support belt in the case of D1, while they are realized as support rollers in claim 1.

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The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

- 3.3 The problem to be solved by the present invention may be regarded as the complexity and the risk of malfunction of the above mentioned movable support plate or belt of the prior art.
- 3.4 By providing the turn-up arms with a set of free turning rollers as means for supporting the tyre component, the advantageous effects achieved are: a simplified construction, a lower mass and a lower risk of dirt contamination and of malfunctions.
- 3.5 The above mentioned problem has not been acknowledged by the prior art; the relative solution proposed in claim 1 of the present application is neither known from, nor rendered obvious by the available prior art.
Therefore, claim 1 is considered inventive according to Article 33(3) PCT.
- 3.6 Claims 2 to 11 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

4. Claims 12 to 14

- 4.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 12 to 14 is not new in the sense of Article 33(2) PCT.
- 4.2 The document D2 discloses (the references in parentheses applying to this document):
"a tyre drum including a turn-up mechanism for use in building an unvulcanized tyre having tyre components of rubber, including reinforcement cords (1, 2) and two bead cores (3, 4) which either may or may not be provided with a bead filling strip, which tyre drum is provided with:
- a central shaft (5),
- two ring segments (6, 7) placed around the shaft and spaced apart for supporting the bead cores (3, 4) and
- means for radially expanding the part of the tyre components that is situated within the ring segments and the tyre drum on either side outside of the ring segments,
- said means being provided with a set of axially extending arms (11, 12), the arms

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at a first free end oriented towards the ring segment being provided with a first turn-up means, particularly a turn-up roller (13, 14), and at an opposite second end being hinged to an axially shiftable arm support,

- the tyre drum furthermore being provided with means (15) for shifting the arm supports in order to move the second ends of both sets of arms axially towards each other,
- the arms being tiltable in radial planes from the initial position to a tilting position in order to thus move the first ends axially and radially while pressing the part of the tyre components situated outside of the ring segments against the expanded part of the tyre components situated within the ring segments,
- each set of arms (11, 12) comprising primary arms (11, 12) provided with a turn-up roller (13, 14) as well as secondary arms (17, 19) situated in between them and also provided with a turn-up roller (16, 18),
- the turn-up rollers (13, 14) of the primary arms (11, 12) in the initial position defining a circumferential series of support surfaces for tyre components (see page 2, paragraphs 16 to 18), and
- the turn-up rollers (16, 18) of the secondary arms (17, 19) being radially recessed with respect to the turn-up rollers (13, 14) of the primary arms (11, 12)" (this feature is clearly shown in figures 2 and 3 which represent the turn-up arms in their radially expanded configuration).

Claim 12 is therefore not new.

- 4.3 Even in the case claim 12 would be amended by specifying that the turn-up rollers of the secondary arms are radially recessed with respect to the turn-up rollers of the primary arms in the initial (un-expanded) position (as shown in figure 3 A of the present application), it would be difficult to justify a possible inventive activity with respect to document D2, as no advantageous effect related to this specific feature is foreseen in, or derivable from the disclosure of the present application.

- 4.4 Also the subject-matter of claims 13 and 14 is not new because the features of these claims are disclosed, in combination, in document D2.

Additional observations

5. The various definitions of the device given in the independent claims 1 and 12 make it uncertain as to what aspects of the claimed invention constitute essential

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features.

These claims hence render each other unclear, with the result that the conditions of Art. 6 PCT are not met.

- 6.1 Independent claims 1 is not in the "two-parts" form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document **D1**) being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).
- 6.2 In the present case, the following features are known in combination from the document **D1** and belong in the preamble of such a claim:
"tyre drum including a turn-up mechanism for use in building an unvulcanized tyre having lyre components of rubber, including reinforcement cords and two bead cores which either may or may not be provided with a bead filling strip, which tyre drum is provided with a central shaft, two ring segments placed around the shaft and spaced apart for supporting the bead cores and means for radially expanding the part of the tyre components that is situated within the ring segments and the tyre drum on either side outside of the ring segments being provided with a set of axially extending arms, the arms at a first free end oriented towards the ring segment being provided with a first turn-up means, particularly a turn-up roller, and at an opposite second end being hinged to an axially shiftable arm support, near the first end at least a part of the arms being provided with means for supporting the tyre component, the support means in an initial position forming a circumferential support surface for the tyre components, the tyre drum further being provided with means for shifting the arm supports in order to move the second ends of both sets of arms axially towards each other, the arms being tiltable in radial planes from the initial position to a tilting position in order to thus move the first ends axially and radially while pressing the part of the tyre components situated outside of the ring segments against the expanded part of the lyre components situated within the ring segments".
7. The features of the claims are not provided with reference signs placed in parentheses according to Rule 6.2(b) PCT.